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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

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Party	Plaintiff	
	Volvo Trademark Holding AB	
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Signature	/Leigh Ann Lindquist/	
Date	05/11/2016	
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EXHIBIT 19

VOLVO TRUCKS - UNITED STATES

🌢 | TRUCKS | PARTS & SERVICE | SERVICES | DEALERS | NEWS & EVENTS | ABOUT US

Volvo Trucks > Services > Fleet Management

Uptime

Fleet Management

Volvo Link

Telogis Partner Services

Financing

Leasing

Training



Find a dealer near you



fleet, a new part, or simply to schedule service-your Volvo dealer is here to help

Know the road ahead



Download the Uptime brochure and see how Volvo can help keep your business moving

Stay connected to your fleet.

Volvo's integrated connected vehicle hardware, standard on every new Volvo—powered Volvo truck eliminates the need for additional hardware purchases. This innovative approach to connected vehicle services gives you unmatched flexibility when it comes to your fleet management system.

The VNL has evolved



Download the new VNL series brochure to see how we've made our best-selling line of

trucks even better

Volvo Link



Volvo Link supports a wide range of affordable vehicle and fleet management services that help you stay connected to your trucks and drivers. Monitor and manage productivity by tracking vehicle performance, locations, fuel efficiency, and more

Telogis Partner Services



An innovative partnership between Volvo and Telogis allows you to ensure CSA compliance and maximize fleet efficiency by staying connected to trucks and drivers.

Fleet Managemen

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VOLVO TRUCKS - UNITED STATES

| TRUCKS | PARTS & SERVICE | SERVICES | DEALERS | NEWS & EVENTS | ABOUT US

Volve Trucks > Services > Fleet Management > Volvo Link

Uptime

Fleet Management

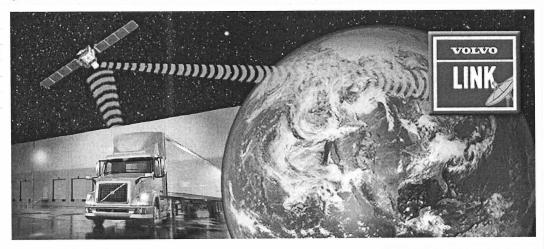
▶ Volvo Link

Telogis Partner Services

Financing

Leasing

Training



Volvo Link Services

Already have a login?	LOG IN HERE!
Need to sign-up?	REGISTER NOW!

STAY CONNECTED VEHICLE MANAGEMENT FLEET MANAGEMENT

Stay Connected, Maximize your vehicle productivity.

Volvo Link supports a wide range of affordable vehicle and fleet management services that help you stay connected to your trucks and drivers. Monitor and manage your fleet's productivity as you receive regular updates on vehicle performance, track locations, manage fuel efficiency, and more.

Volvo Link hardware is standard equipment on all new Volvo trucks equipped with Volvo engines. The hardware is also available as an option on Volvo trucks with Cummins engine Volvo Link service packages can be specified at the time of purchase or can be activated on a month to month basis. Volvo Link brings the advantages of integrated vehicle communication to any fleet operating anywhere in the United States and Canada...

Call 800-52 Volvo (+1 800-528-6586) for Volvo Link technical support. Or email your questions to support.volvolink@volvo.com

Find a dealer near you



Whether you need a new fleet, a new part, or simply to schedule service—your Volvo dealer is here to help

No time for downtime



Learn more about our suite of Uptime Services that can help maximize your fleet's uptime.

Know the road ahead



Download the Uptime brochure and see how Volvo can help keep your business moving

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Sul

VOLVO TRUCKS - UNITED STATES

▲ I TRUCKS I PARTS & SERVICE I SERVICES | DEALERS | NEWS & EVENTS | ABOUT US

Volvo Trucks > Services > Fleet Management > Volvo Link

Uptime

Fleet Management

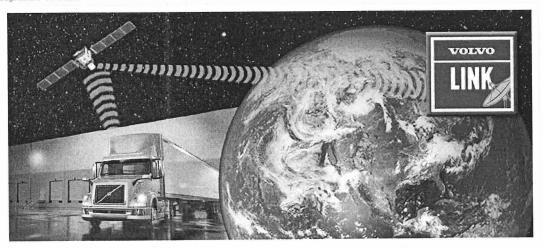
Volvo Link

Telogis Partner Services

Financing

Leasing

Training



Volvo Link Services

Already have a login?	LUG IN TICKE!
Need to sign-up?	REGISTER NOW!



Volvo Link vehicle management services focus on vehicle uptime and improving efficiency and performance.

Volvo Link Perform

The Perform service provides performance reports to ensure that each vehicle is being operated for maximum safety and efficiency.

Vehicle performance data is wirelessly transmitted so you can see how well your trucks and drivers are performing. This includes valuable summaries of fuel usage under different driving conditions. You can also see factors that indicate how safely the vehicle is being driven.

- · Monitor fuel used, distance traveled, engine RPM, and speed.
- · Weekly trends showing event frequency for your truck's antilock brake system, traction control and Volvo Enhanced Stability Technology system (VEST).
- · Simple reports provide information you can use to measure and manage performance of a vehicle, a range of vehicles, or your entire fleet.
- Fault code reports and alerts including the option to get email alerts of critical diagnostic

Minimum requirements:

· Volvo Link hardware

Need help?

Call 800-52 Volvo (+1 800-528-6586) for Volvo Link technical support. Or email your questions to support.volvolink@volvo.com

Find a dealer near you



Whether you need a new fleet, a new part, or simply to schedule service—your Volvo dealer is here to help.

No time for downtime



Learn more about our suite of Uptime Services that can help maximize your fleet's uptime

Know the road ahead



Download the Uptime brochure and see how Volvo can help keep your business moving



VOLVO TRUCKS - UNITED STATES ▲ | TRUCKS | PARTS & SERVICE | SERVICES | DEALERS | NEWS & EVENTS | ABOUT US Volvo Trucks > Services > Fleet Management > Telogis Partner Services Uptime Find a dealer near you Fleet Management

Volvo Link Telogis Partner Services Financing Leasing Training



Take control of your fleet with Telogis for Volvo Trucks.

Telogis and Volvo Trucks have partnered to offer innovative telematics to help you better manage compliance and fleet efficiency. The cloud-based solution leverages existing hardware standard in every Volvo Truck with Remote Diagnostics and requires no activation fees or incremental investment. Telogis is the perfect solution for any fleet looking to improve operating efficiency, maximize uptime, and improve safety. And Telogis can be used in any truck regardless of make, letting you implement a single telematics solution across your entire fleet.

Two packages are available and can be purchased individually or bundled together at a discounted price.

Telogis Fleet for Volvo Trucks



Get access to these services and more:

- Vehicle tracking
- Vehicle history
- · Real-time alerts
- · Fault code reports
- · Driver safety reports

Telogis Compliance & Nav for Volvo Trucks



Get access to these services and more:

- · Hours-of-Services (HOS) reporting
- · Driver Vehicle Inspection Reporting (DVIR)
- · State miles (IFTA) reporting
- · Commercial navigation

Learn more about Telogis for Volvo Trucks



Whether you need a new fleet, a new part, or simply to schedule service—your Volvo dealer is here to help.

No time for downtime



Learn more about our suite of Uptime Services that can help maximize your fleet's uptime.

Know the road ahead



Download the Uptime brochure and see how Volvo can help keep your business moving

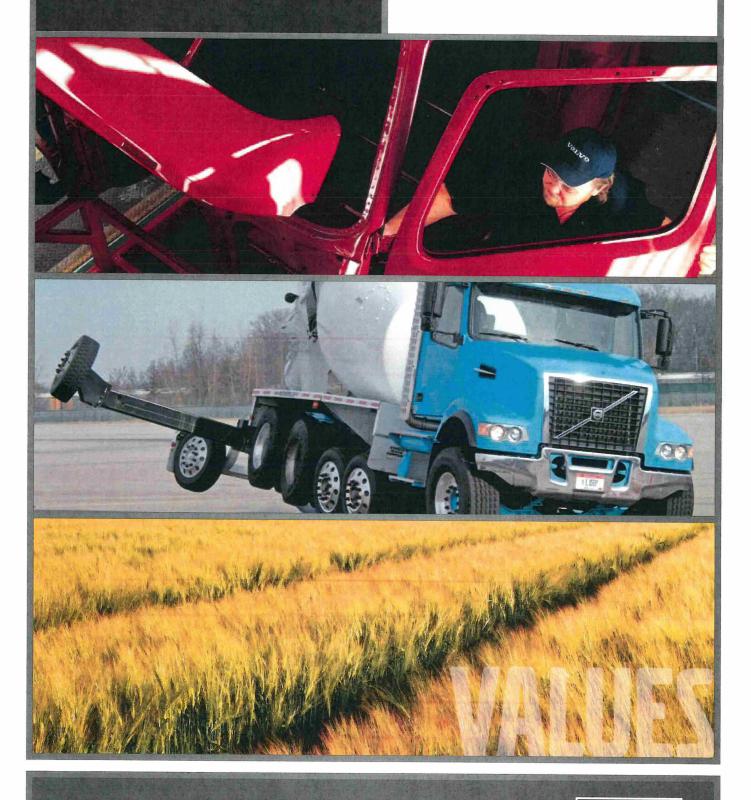


EXHIBIT 20

CORE VALUES

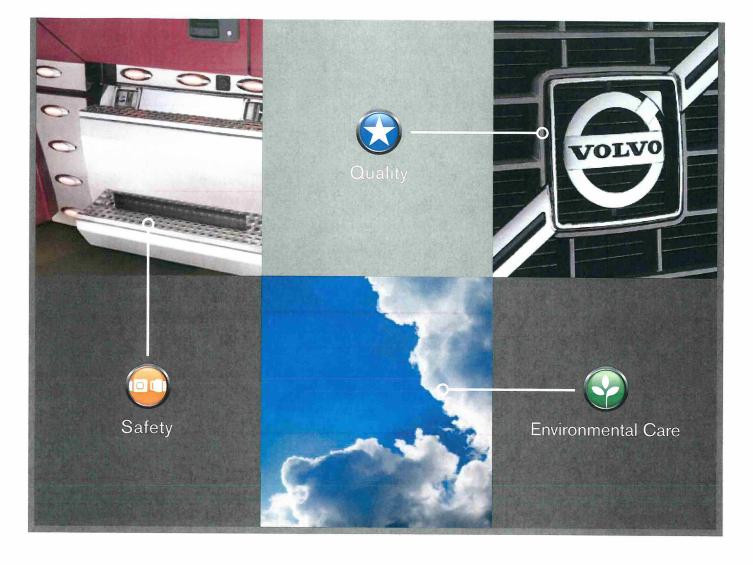
Volvo Trucks. Driving Success.*





VALUES THAT DRIVE SUCCESS





Welcome to the very core of our company.

What is most important to us? What do we stand for as a company? Are we good stewards of the environment?

Do we put safety before profit? Are our products well made and reliable?

At Volvo Trucks, we think these are important questions.

Whether specifying a truck, expanding a fleet, or building a business, our core values are evident in everything we do. These pages outline our commitment to the core values of quality, safety and environmental care.

Each value is reflected in how we develop our products, how we act in society, how we treat the planet, and how we serve our customers.





VOLVO TRUCKS | Quality

Quality expresses our mindset. We provide products and services that can be trusted.

Quality comes first. In the products we manufacture. In the processes and people we employ. And in the service and support we provide our customers. Our commitment to quality is the foundation of everything we do.

Quality In Customer Focus

Quality is a measure of our performance as experienced by our customers. Success in the market depends on our ability to understand and satisfy customer needs and to exceed customer expectations. To succeed we must do this better than our competitors, which requires that we listen to our customers, and plan continuous and sustainable improvements in our operations based on their input.

Quality is consistent conformance to customers' expectations. It is built into our products, services and processes, providing reliability, high truck uptime and trouble-free ownership.

Quality In Manufacturing

There is excellence in abundance at our New River Valley Plant, where we assemble and paint the cabs, fairings and accessories for all VT and VN highway tractors and VHD vocational trucks. The facility is ISO 14001 environmentally certified and was one of the first heavy-truck assembly plants in North America to gain ISO 9001 certification.

As an integrated manufacturer of engines, chassis and cabs, we control every step of the production process from concept to manufacture. This focus enhances quality in our products—and productivity for our customers—mile after mile.

Quality Through Leadership

Quality is also a component of leadership, defining a company with clearly expressed long-term goals and a commitment to constant improvement.

Volvo Trucks is driven to be a leader in quality among the world's providers of transport-related hard and soft products. It is vital that our products and services not only achieve but also exceed our customers' expectations.



Each Volvo truck is built to rigorous quality standards that apply to all facets of its construction. Our global manufacturing processes ensure that every truck is assembled correctly on the production line. And careful inspection of random trucks verifies their quality before they leave the plant.



VOLVO TRUCKS | Safety

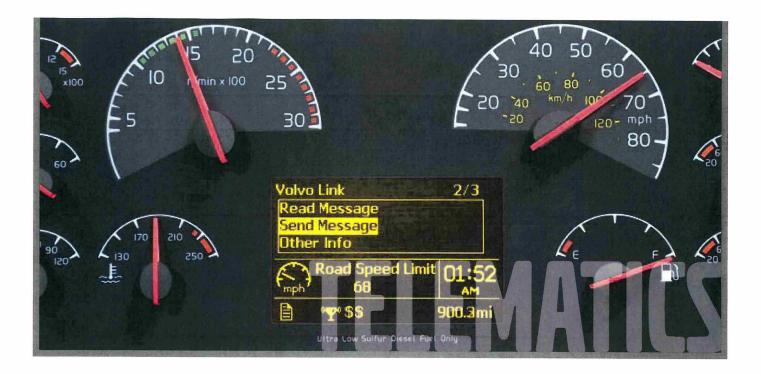
At Volvo Trucks, safety isn't an option. It's our standard way of building the best—and safest—trucks on the road.

Volvo Trucks has focused on vehicle safety since the earliest days of the company. And over the last 80 years, Volvo Trucks has been responsible for a long list of safety innovations. Most famously, Volvo Trucks invented the three-point seatbelt. In 1974, the first Volvo truck with safety belts as standard equipment was delivered to the US. It continues to be standard on every Volvo truck.

Volvo Trucks was the first company in North America to make driver-side airbags standard on our trucks. We introduced antilock brakes as standard in 1992. We pioneered daytime running lights so other drivers sharing the road will be better able to see oncoming Volvo trucks. In addition, the design of our truck cabs helps to maintain survival space for occupants, even in the event of frontal impact rollovers.

We pioneered the High-Strength Steel safety cage cab. We also engineered our trucks so that the engine and transmission drop down to the pavement during a frontal impact, instead of crushing into the interior of the cab. Volvo Trucks helped develop—and is the only manufacturer to pass—the Swedish Impact Test, the toughest in the world. The three parts of the test simulate typical truck accidents. We also do extensive barrier impact testing.

Thanks to this proactive attention to safety, our trucks have become famous for how they protect our customers. We routinely receive unsolicited testimonials from customers detailing how they survived extreme accidents.



These first-hand accounts renew our determination to make even safer trucks.

Active Safety

While the "passive safety" of impact protection is important, we know the best accident is one that never happened. So much of our focus recently is on active safety—the ability to avoid accidents or lessen their severity.

Volvo Trucks made a significant advance in active safety in 2005 when we made Volvo Enhanced Stability Technology (VEST) standard equipment on all of our highway trucks. VEST assists drivers in controlling their trucks in adverse conditions, such as snow or wet pavement. It also provides extraordinary protection against rollovers, the leading cause of truck driver fatalities. And by its very nature, VEST reduces risks for other drivers.

Safety Through Telematics

Volvo Trucks is using telematics to improve safety. Our Volvo Link two-way satellite communications system gives fleet managers detailed information about vehicle operations.

This includes the ability to see which drivers need additional coaching for safe driving techniques by alerting managers to events such as hard braking or ABS activation. New Volvo trucks with Volvo Link include two years of Sentry service at no charge.

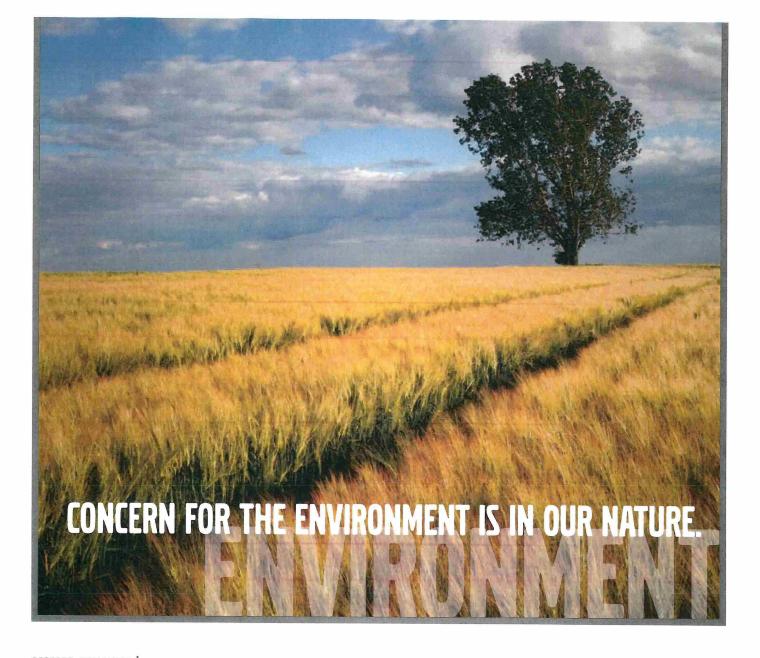
The Value of Safety

Volvo Trucks obviously cares deeply about safety and is committed to bringing advanced technologies to market. The economic value of safety can be measured by the obvious costs of accidents, such as property damage and injuries, as well as hidden costs like downtime, missed deadlines, lost customers and difficulty recruiting drivers. Using government statistics, we can demonstrate that vehicle safety can be a competitive advantage, as well as a tremendous benefit to society.

Volvo Trucks are easy to drive and maneuver, with great visibility all around. They're built to keep drivers alert in a work environment that's comfortable and safe, to help prevent accidents in the first place.



Volvo Trucks' commitment to Safety by Design helps drive the success of your business by putting the well-being of drivers and their families first. And our attention to safety lowers insurance costs related to accidents, and reduces cargo loss and downtime due to accidents.



VOLVO TRUCKS | Environmental Care

At Volvo Trucks, we recognize our responsibility to contribute to solving environmental issues that face our planet, our company, and society at large.

This commitment to environmental care influences our decisions on the products and services we offer, how we operate our facilities, and when and why we should be involved in environmental issues that arise.

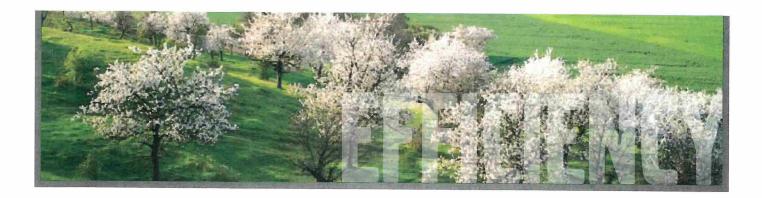
Volvo Trucks is deeply committed to minimizing the impact of our products and processes on the environment. Every new vehicle must be safer, lighter, and more fuel-efficient than the one it replaces. As we bring new products to market, our manufacturing processes are engineered to

minimize the consumption of energy and the use of raw materials. And we're committed to reducing the production of waste and residual products at each step along the way.

Emissions Regulations & Compliance

Volvo Trucks EPA 2007-compliant engines feature advanced emissions technologies, including:

- High-efficiency exhaust gas recirculation (HEGR), which uses gases to reduce NOx formation in the engine.
- A diesel particulate filter (DPF) that traps and consumes 90% of the soot emitted by earlier engines.



By 2010, the EPA will have cut its allowable levels of nitrogen oxides and soot in heavy-duty diesel exhaust by 90% from a decade ago. Meeting the EPA 2010 regulations requires a "total vehicle solution":

- Exhaust gas recirculation inside the engine for NOx reduction.
- · A diesel particulate filter to trap soot particles.
- A new process called Selective Catalytic Reduction (SCR) to treat the exhaust after it leaves the engine to meet the new EPA limits.

Fuel Economy

The new Volvo truck models also feature sophisticated electronic control systems that make it possible for drivers to see immediately if they're operating the vehicle at peak fuel efficiency for their specific application. Customers can choose the Volvo I-Shift automated manual transmission to secure even greater fuel economy gains.

Aerodynamics

Aerodynamic improvements can contribute to reducing fuel consumption and emissions. Volvo Trucks is known for the fuel efficiency and aerodynamics of its trucks, and we've partnered with the Environmental Protection Agency to develop a comprehensive package of vehicle components to deliver high fuel efficiency and low emissions, as part of EPA's SmartWay™ tractor program.

Anti-Idling

One key way to reduce a truck's environmental footprint is to make sure the vehicle isn't wasting fuel—and producing unnecessary emissions—while the engine is idling.

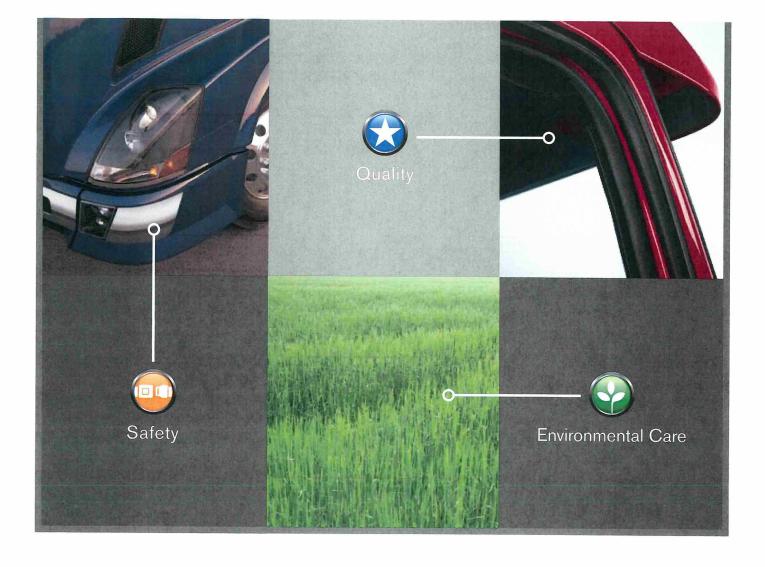
Volvo Trucks is addressing this problem by supporting electrification of truck stops and loading docks, to help drivers eliminate the need for idling. We offer shore power units and cab parking heaters, as well as the option of extra cab insulation. Volvo Trucks also offers auxiliary HVAC systems that can be powered by shore power or by generator to cool and heat the cab without idling.

Alternative Fuels

The use of renewable fuels can reduce carbon emissions while improving energy security. Volvo Trucks is leading the industry in developing vehicles that can run on a wide variety of possible alternative fuels, and in advancing the global dialogue regarding the environmental impact and commercial viability of these alternatives.



As a core value, environmental care expresses our commitment to improve energy efficiency and protect natural resources. We'll always do all we can to reduce emissions in every aspect of our business.



VOLVO TRUCKS | Core Values

Think of our core values as promises. (We do.) They are embraced by every Volvo Trucks employee.

And while these values have been in place for many years, they have never been more important than they are today.

We are clearly aware that our actions affect the world we live in. They affect the climate, the air we breathe, the natural resources that remain, and the health and well-being of our society. They affect the safety of our drivers, their passengers and all who share the road. And, ultimately, our actions as a company affect not just our own success, but also the success of our customers, suppliers and investors.

That's a big responsibility.

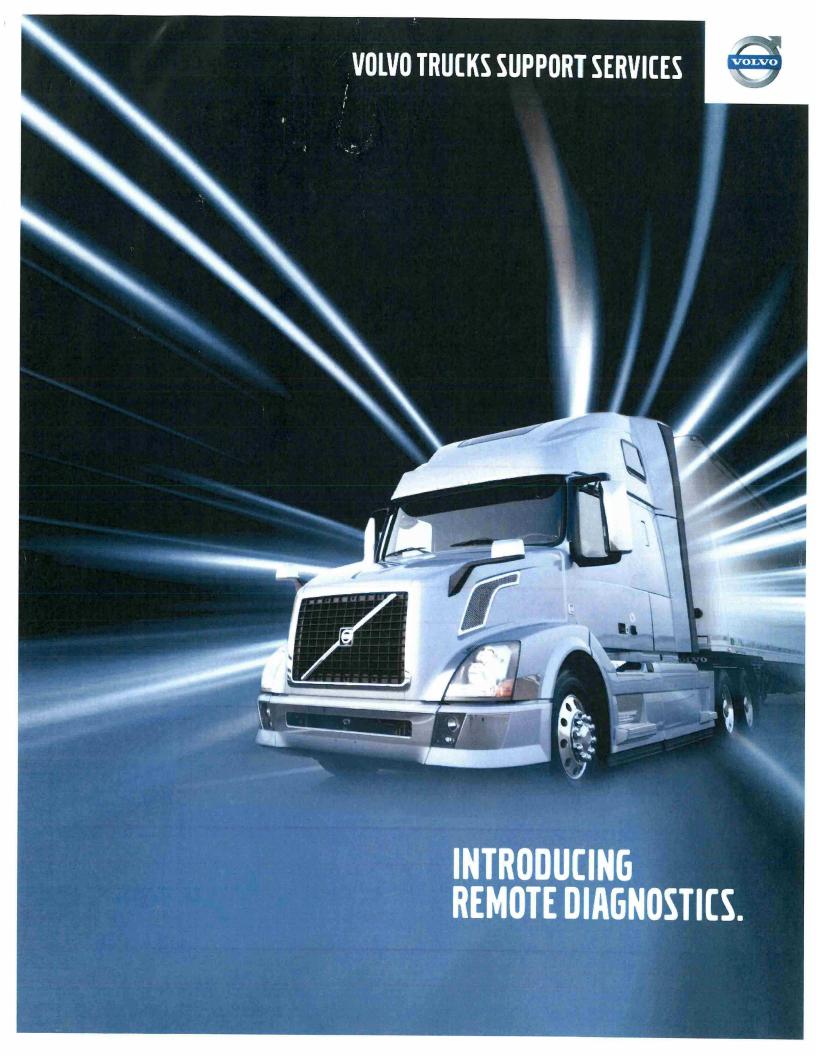
We're up to it. And we'll keep our promises.

Volvo Trucks North America P.O. Box 26115 Greensboro, NC 27402-6115

5600A Cancross Court Mississauga, Ontario L5R 3E VOLVO

www.volvotrucks.us.com 1.800.444.RSVP ©2008 Volvo Group North America, Inc PV835-901

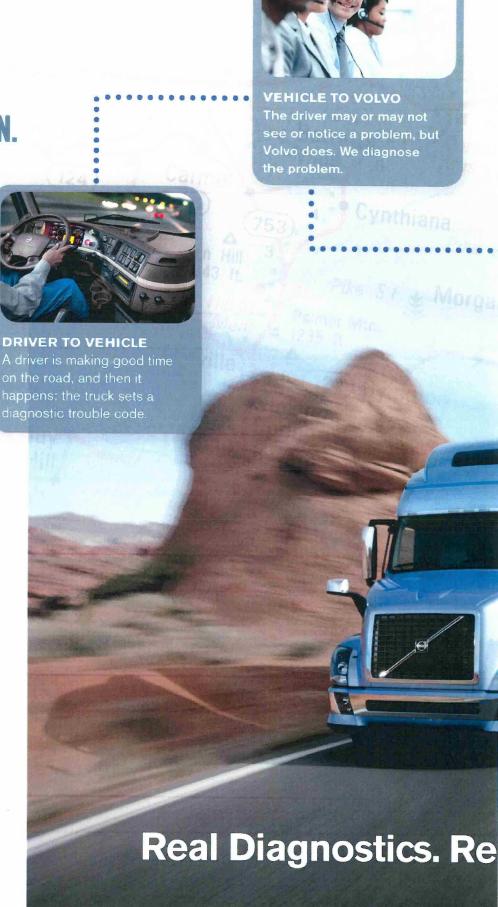
EXHIBIT 21



UPTIME MANAGEMENT. DOWNTIME PROTECTION.

Volvo Trucks Support Services is an integrated business solution that enables customers to do what they do best: deliver freight. With Volvo Trucks Support Services, customers are connected to high-performance, customized services – streamlined communications, around-the-clock availability of electronic parts purchasing, a wide array of preventive maintenance programs – all delivered in a simplified bundle of Fleet Services, Parts Purchasing and Service Management.

Now we've added a fourth component to our support services bundle, Connected Vehicle Services. A seamless, dynamically connected system "of vehicle management tools – all working together to keep your customer's trucks on the road and their bottom line in the black:





REMOTE DIAGNOSTICS PROVIDES:

- Proactive diagnostic and repair planning assistance with detailed analysis of diagnostic trouble codes
- Streamlined service procedures with parts on-hand confirmation before a truck arrives for service
- Live Dealer and Customer communication through Volvo Action Service
- Service case communication and documentation between Volvo Action Service, Dealer and Customer provided through ASIST

Customers benefit with Real
Uptime Management and
Real Downtime Protection.

For more information, go to www.volvotrucks.us.com

EXHIBIT 22

DRIVING BOLIVIA'S SALT FLATS

Man and machine put to the test in world's largest salt desert.

5 CITY DRIVING

How to be a better driver in the city.

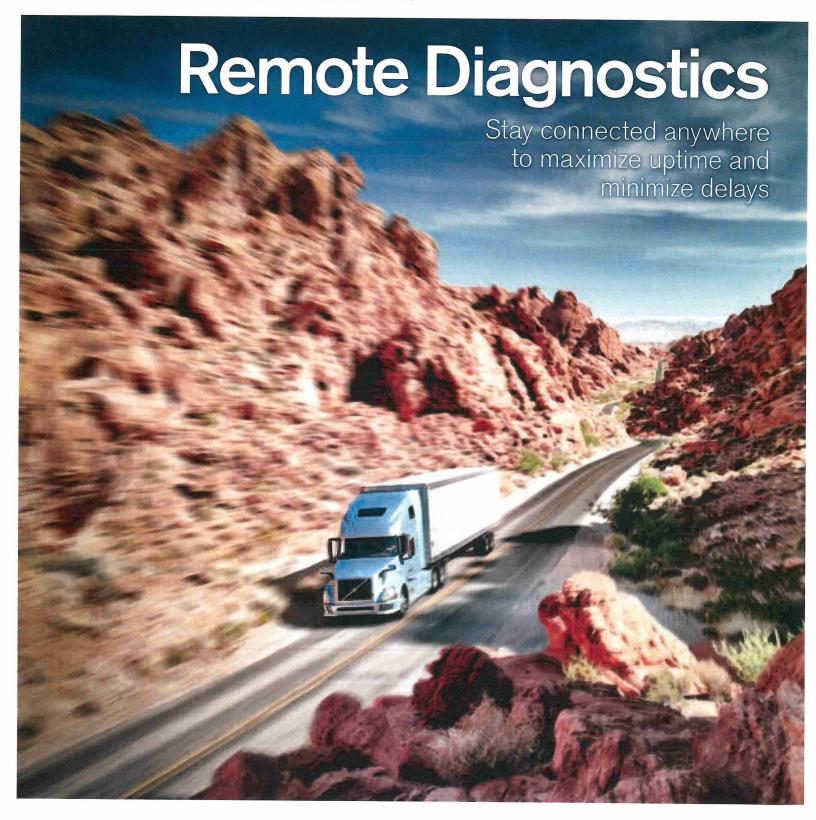
CHALLENGER MOTOR FREIGHT

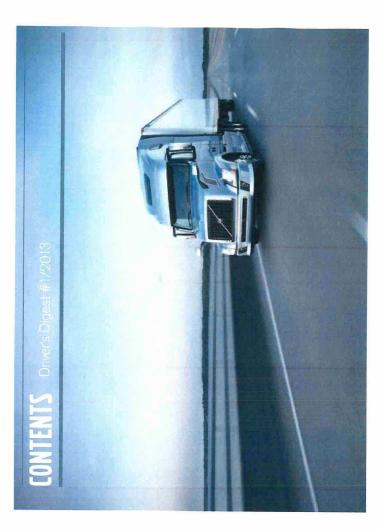
Bryan Burningham keeps the fleet rolling with Volvo's Remote Diagnostics.



DRIVER'S DIGEST

THE VOLVO TRUCKS MAGAZINE FOR TRUCKING PROFESSIONALS • #1/2013





22 TEAM UPTIME

diagnostic and maintenance solution how the Remote Diagnostics team A behind-the-scenes story about designed a comprehensive fleet maintenance infrastructure, The downtime and maximize profits. technology paired with existing results enable fleets to reduce using cutting-edge telematics

Driving on Salt

Driver Dario Machaca drives across Salar de Uyuni in Bolivia, the world's largest salt desert.



City traffic is stressful. Volvo Trucks Academy gives their best tips on how to become a better driver in the city. 16 5 Tips on being a better city driver



20 Challenger Motor Freight

Bryan Burningham's challenge to keep the fleet's trucks rolling is made easier with Volvo's Remote



EDITORIAL LETTER

Inside Driver's Digest

Welcome to the newly redesigned spring issue of Driver's Digest where we incorporates the same design and layout used by Volvo Group companies around the globe. It is filled with rich color photography, dynamic product launch the new look and feel of the magazine. This is the first issue that shots and insightful articles customized especially for you.

with Ellen Voie, the founder and president of Women in Trucking, where she who haul across the world's largest salt desert in Bolivia. Enjoy a lively Q&A the award-winning service that maximizes vehicle uptime through proactive Challenger Motor Freight, uses Remote Diagnostics to improve his bottom line and it will offer insight into why we have made it a standard feature on diagnostic and repair planning assistance with detailed analysis of critical trouble codes. Read how Bryan Burningham, Director of Maintenance at all models. You will experience the fascinating adventures of the truckers Diagnostics team and learn about their innovative approach to designing answers tough questions about the issues facing women truckers today. Finally, you will learn about all the investments that we are making to our In this issue, you will go behind-the-scenes to meet the Remote dealer network to better serve you.

Sit back and enjoy the articles and photography celebrating the global



Göran Nyberg





President, Volvo Trucks North America Sales and Marketing

DRIVER'S DIGEST

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If you have any questions contact us at "function.DriversDigest@volvo.com

4 DRIVER'S DIGEST #1/2013

START

News & updates from the Volvo world



teams gladly gear up for the bi-annual contest, hoping to

lay claim to the VISTA title and global bragging rights. At the end of several grueling rounds of theoretical and practical challenges, the top 32 teams (from

more than 4,400 this year) get to travel to Gothenburg For North America, VISTA 2012-2013 has been the

Sweden in June for the VISTA 2012-2013 World Final

from the U.S. and Canada competed against the clock biggest ever, and a 70 percent increase in dealer partcipation is key to the program's success. Five teams

frucks North America. Each of the five semi-finalist and each other in Greensboro, N.C., home of Volvo teams invested up to 34 hours of additional service

training throughout their journey.

Customers are the big winners in Volvo Trucks' VISTA competition, a mass training event and aimed at making aftermarket personnel even better at what they do, Still,

challenges aftermarket

teams

VISTA contest

From Left to Right: Matt Glesbrecht Tyler Kronebusch, Dan Orser, Clarence Oosterhoff

BABINE TRUCK & EQUIPMENT

Americas, and Ray Dueck, technical service manager for Volvo Trucks Canada, with the Babine Truck & Equipment leam (Clarence Oosterhoff; Tyler Konebusch, Dan Orser, and Matt Gissbrecht). From left, Denny Slagle, executive vice president, Group Trucks Sales & Marketing



SHORT FACTS

claim a spot amongst the best of the best.

RECORD NUMBER OF ENTRIES

participants signed up to compete, beating previous participation records by almost 3,000. This year, 16,800

The higher the participation PARTICIPATION KEY TO SUCCESS

the more training and more team development — which ultimately supports better customer satisfaction.

Quality effort recognized

"The team was able to build on our exist-

Volvo Group President and CEO Olof Persson honored the Volvo Remote Diagnostics project team with the Group's Internal Quality Award for 2012.

Volvo's core value of quality for customers and tive servicing solution that can be applied In markets around the world. It also reinforces The project - selected from 25 entries across the Group—resulted in an innovathe heavy-truck industry.

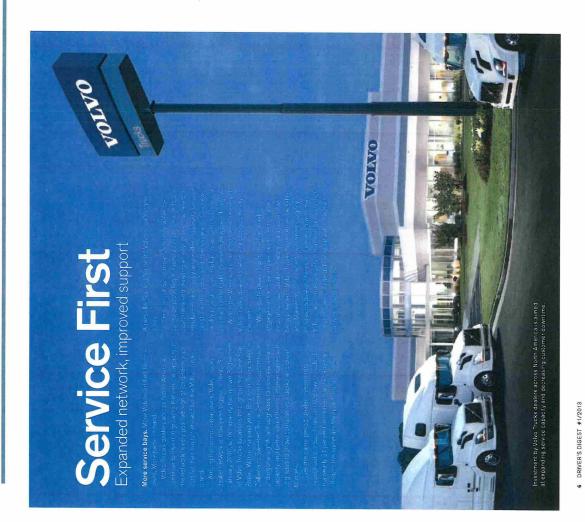
traditional emergency call center service," said customer's needs from the beginning, and the Stephen Roy, Senior Vice President, Commercial Aftermarket. "They stayed focused on our will give us a competitive advantage in our markets. I'd like to congratulate everyone inresult is a new way of vehicle servicing that ing telematics technology to go far beyond



Remote Diagnostics Team Left to right: Evandro Silva, Todd Gardner, Magnus Gustafson, Olof Persson, Barry Morgan Rich Glasmann and Conal Deedy.

volved in the project for an outstanding effort."

DRIVER'S DIGEST #1/2013 5



Safest Fleets Search

is searching for the safest fleets in North America to award will receive \$25,000 to be used toward their safety-related Putting its money where its core values are, Volvo Trucks its annual Volvo Trucks Safety Award. The top two fleets with the safest driving records and top safety programs

Volvo Trucks will again join Michelin in sponsoring the award that is open to all U.S. and Canadian fleets operating at least five Class 8 units with at least one Volvo tractor. The deadline for entry is July 31, 2013.

Complete rules and entry forms are available at www.volvotrucks.us.com/safetyaward.



High-tech uptime tools

now equipping all vehicles with In order to maximize vehicle to enhance the effectiveness a Quick Response (QR) code uptime, Volvo Trucks is leveraging geo-fence technology service. Volvo Trucks also is of the Remote Diagnostics to further streamline service and repair activities.

vehicle platform we introduced ast year with Remote Diagnos-"Geo-fencing and QR code technologies present an exciting opportunity to build on the capabilities of the connected

ket solutions, "New and innovathe door for us to be even more proactive and offer services to tive technologies are opening expedite the repair process."

staff at Volvo's Uptime Center process, determine the most better understand the repair efficient way to address a

tics," said David Pardue, Volvo Geo-fencing technology

repair situation and measure time to completion of repair at will help Volvo dealers and the service facility.

telematics technology and ture, Volvo Trucks enables fleets to reduce their

downtime, enhance their

FIELD TESTED 2012 North American Customer Value Volvo Trucks' Remote Diagnostics aftermarket service has received the Enhancement Award in Commer-cial Vehicle Repair and Maintenance from global growth company Frost & enhancement," said Frost & Sullivan's Trucks as a leader in customer value "We're proud to recognize Volvo prehensive fleet diagnosout of remote diagnostics, tic and maintenance solution takes the uncertainty Kumar Saha, "Their comomers have the correct ensuring that their cusuptime. By effectively solution to increase

operational efficiencies and maximize

Remote Diagnostics

earns award for

customer value

the first service being offered under the helps maximize vehicle uptime through ning assistance with detailed analysis of critical diagnostic trouble codes. It's proactive diagnostic and repair planpowered VN model highway truck, Volvo's Remote Diagnostics, a standard feature on every Volvo-

Volvo Trucks Support Services bundled aftermarke Services category of the new Connected Vehicle The remote communioffering.

cation platform facilitates charge for two years with live dealer and customer team and comes free of Volvo's 24/7 support Volvo Action Service, Volvo trucks.



unique customers op-erating more than 1,300 Volvo VNs with the Prior to launching the service, Volvo drew on feedback from 15 connected vehicle

DRIVER'S DIGEST #1/2013 7

INTO THE GREAT WHITE OPEN



DRIVING REPORT

expanse and the crisp cold air bites at the cheeks. For a recent arrival the thin air manistarting to filter through over the mountain peaks surrounding the salt flat. The he first sunrays of the morning are wind gathers speed over the endless

"It is not dangerous to

drive on the salt but if you drive off your

> Dario Machaca Colque says as he climbs up into the cab of his Volvo FH16 parked outside his "I started driving Volvo trucks here when I was 14 and I have never used other trucks," fests itself in the form of a light headache.

regular route you can

DARIO MACNACA COLQUE, TRUCK DRIVER get into trouble."

> Potosi in western Bolivia. The world's largest salt flat covers the same area as the city of Los Angeles and consists of 4,200 square miles of densely home in the little town of Colchani. Salar de Uyuni, or Salar de Tunupa as the local Indians call it, is situated in the province of packed salt.

Today, Dario will load and transport salt that is extracted from the salt flat. Before heading out he picks up the loaders who will help him today. They have a hard day's work ahead of them. The large trailer will be loaded with 62,000 pounds of salt – by hand, aided only by simple shovels. That's why Dario makes sure he brings lunch

around here," Dario says as the two loaders arriv also from this town. Everyone knows everyone "That's Edgar and his brother Ivan, they are and drinks for the loaders.

Edgar and Ivan climb up on the trailer bed where their father Paulino, who is also a loader,

Forty thousand years ago, this whole area was a prehistoric lake, and when the water receded is already sitting.

the salt flat was formed. The salt crunches under white emptiness and Dario navigates using the the wheels when the truck drives out on to the vast plateau where it makes large octagonal shapes. All traces of the road disappear in the

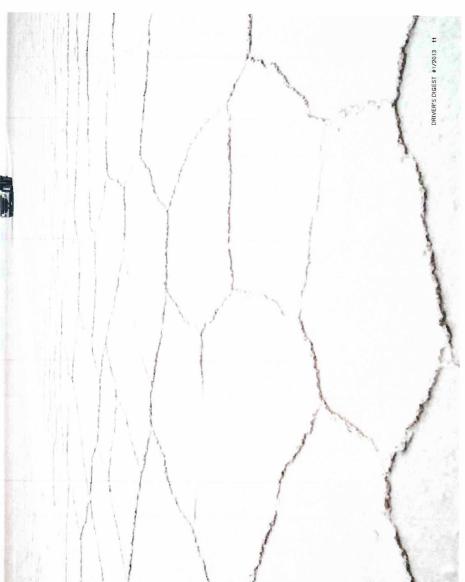
mountains in the distance as reference points. His knowledge of the local area is exceptional.

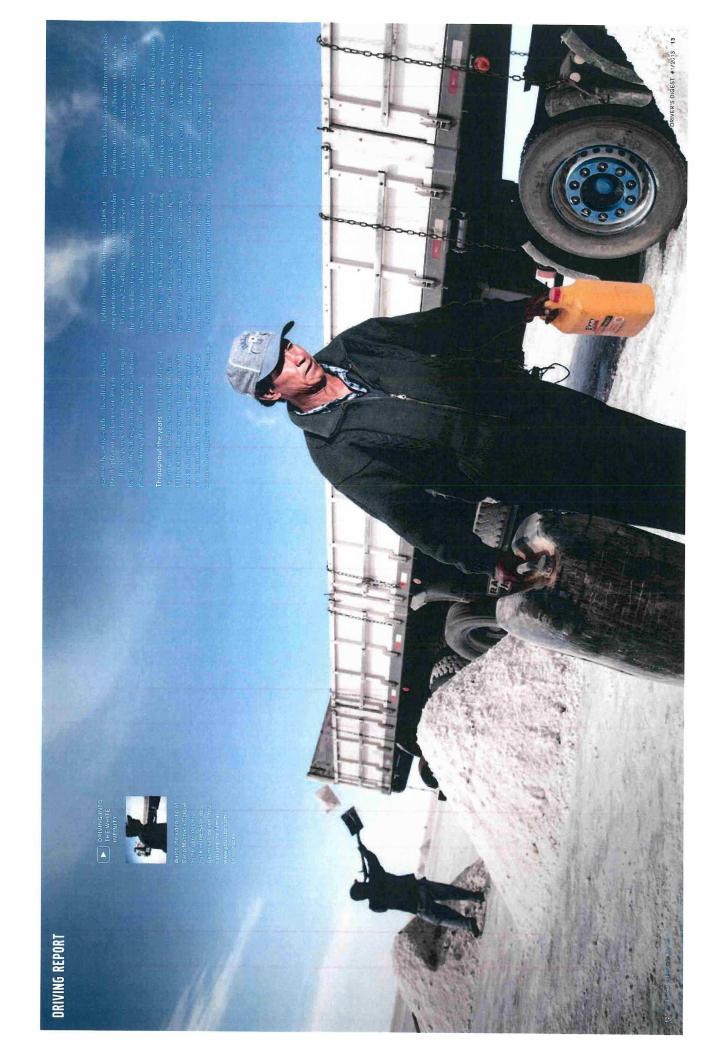
of compressed salt, one upper and one lower. In between these is a layer of mud. It is not dangerous to drive on the salt but if you drive off your regular route you can get into trouble. In some places the surface is softer and the truck can get "The surface is really made up of two layers stuck deep in the salt."

to a life spent working hard in constant struggle > the creases at the corners of his eyes bear witness The sun climbs up over the horizon and the rays bounce off the white terrain making sunglasses essential. Dario's calloused hands and



Dario Machaca Colque has been working in the salt desert for more than 30 years. Today he owns and operates two Volvo FHs. He has imported the trucks himself from Europe.













Since the salt accelerates rusting, the work is hard on the trucks. Dario explains that quite a bit of maintenance work is necessary:

them with oil and grease to protect them during "After every second trip in the salt we wash the trucks carefully with water. Then we spray the next trips."

is extracted from Salar de Uyuni. The extraction process is simple but labor intensive. The salt, which is moist, is piled up by hand to dry over-Every year approximately 28,000 tons of salt night before it is loaded.

Suddenly, the endless whiteness is interrupted pronounced. Dario stops his truck, climbs dowr and explains to Edgar, Ivan and Paulino, how the work shall be done. First three piles of salt are to be loaded on one side of the trailer bed, the pyramid shaped piles of salt become more then the truck is turned around and an addiby silhouettes in the distance. After a while

tional three piles are loaded on the other side.
"It is important to load from both sides so

He points out into the distance. "In this area the salt is solid enough that there are no problems driving heavy trucks here, but over there it is softer. Over there the trucks can sink into the salt."

that there is no imbalance," Dario explains.

rainy season of the summer months, the nearby Popoo lake floods and covers the flat with a layer of water. In some places the depth can be up to a Right now the salt flat is dry but during the

"That is why we build up a supply of salt in Colchani before the rain comes, and load from there. Neither us nor the producers work in the salt flat during the rainy season." meter (3 feet).

Paulino, Edgar and Ivan throw the last few shovels of salt on to the trailer bed. The work has given a ride back to Colchani by one of the many taken a little under three hours. Then they are cars working in the tourism trade in the area. Before Dario heads back, he and his truck

in from the nearby stone deserts and builds up are caught in a sand storm. The wind pounds sandy brown clouds on the horizon. The fine dust falls on to the salt flat.

Dario sits in his cabin waiting for the storm to "It usually only lasts no more than an hour, calm down.

then it exhausts itself," Dario explains. He turns on the radio where a news anchor runs through the local summary in staccato.

tance the ominous clouds draw away from the He is right, the storm passes and in the dissalt flat as Dario starts up his engine.

THE COMPANY

Background: Established 2007 Name: Cooperativa de Transporte Pesado Nal. e Inter. Location: Uyuni, Potosi, Bolivia "11 de Julio" LTDA

Number of employees and

trucks: 26 employees, 23 trucks 20 of them Volvo FH minerals from, the Uyuni area to the neighbouring provinces Orurc international transport of mining equipment and supplies to, and Operations: Domestic and

ing the owners and drivers of the trucks with logistics, paperwork and customs declarations. and Cochabamba and to Chile. Other: A co-operative assist-

43,500 miles.

long distances and heavy loads, this 2005 truck has a 16.1 liter 610hp and it boasts 2800nm of tractor with a Brazilian trailer made by Randon. Intended for Technical data: Volvo FH16 in-line six-cylinder engine with

the mines in the area, and salt from the salt flats both interna-How is it used: Used for trans porting borax and sulphur from A typical assignment takes torque at 1000-1500 rpm. tionally and domestically.

THE AREA



THE DRIVING CHALLENGE

Text Nic Townsend Illustration Petter Lönegård

ahead in city traffic Thinking one step

"Most drivers have a tendency to concentrate on whatever is ahead of them, whether it's another vehicle or a traffic light," says Scott Sokach, Manager, Driver Training and Development, Volvo Trucks

behind and to the side? As a driver, aware of everything around you. What's farther ahead? What's "But it is very important to be

ticipation, drivers can minimize gear anticipate what might happen next so that you're already prepared." Through better planning and an-

you want to read the road ahead and

duces wear and tear, and increases abouts might make it impossible to stops, which in turn saves fuel, reavoid stopping and braking comchanges, braking, and complete safety. Traffic lights and round-

pletely, but planning your approach

safe distance between you and the vehicle ahead. Brake as needed but ideally keep

braking power when you reach the light. Gradually slow down, while maintaining a

accelerate as it simply means using more release the throttle and gradually reduce speed. There is no point in continuing to

When the traffic lights are changing to red,

Take action

time saved by driving faster is spent sitting still. In the process, you'll waste fuel by accelerating from a still has many benefits, "We tend to maintain our speed because this feels quicker," adds Sokach. "But the reality is that the when approaching a stop, before quickly switching to the brake,

The proactive approach can be applied Same principal applies to all situations moving if traffic allows so you do not need to come to a complete stop. Safety Campun IMPROVEMENTS complete stop."

including exit ramps, roundabouts, and blind corners. Remember to ease off the throttle, traffic.With these simple techniques, you can smooth, gradual acceleration to blend into roll as much as possible, and limit the use to many situations other than traffic lights, reduce idling time and increase coasting, of your brakes when slowing down. Use which in turn reduces fuel consumption.

8

It's important to not only watch on

immediate situation

Look beyond

what is immediately ahead of you

Look around you and be aware

points. Rather than focus on your

current situation, you should be that you're always a step ahead.

evaluating the next situation so

potential obstacles and stopping

of your surroundings, including other vehicles, pedestrians, and



Evaluate your next action

000 you've gone through the lights at a slower pace, you haven't When the light changes back to green, accelerate smoothly and gradually get back up to speed while also maintaining ever, by minimizing the use of your brake, you've saved fuel a safe distance. Even though actually lost any time, How-

> Traffic lights shouldn't be seen as a challenge – they're out of your control so focus on what

you can control.

16 DRIVER'S DIGEST #1/2013

up, but this will often result in being forced to brake heavily.

pating a change to red. The temptation will be to speed light, you should be antici-As you approach a green

and wear on your brakes,



DRIVER'S DIGEST #1/2013 17





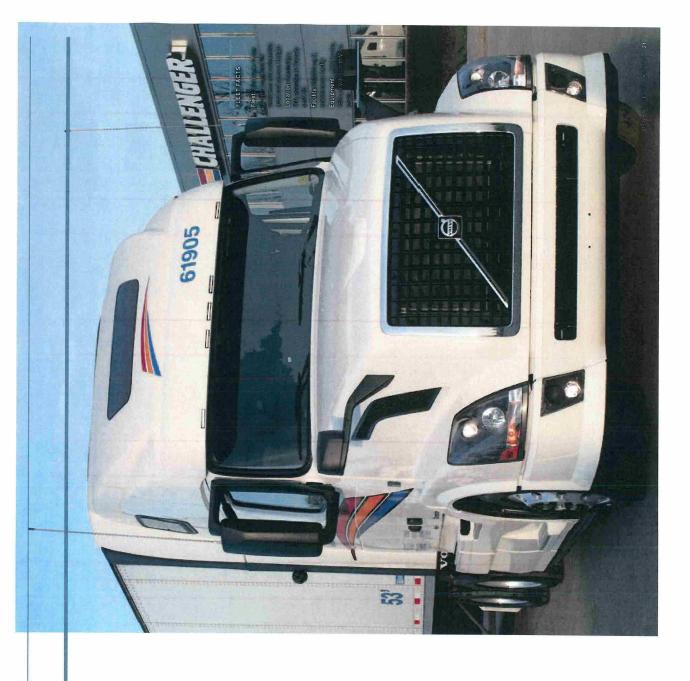
schedule repairs and get the freight delivered Challenger Motor Freight fleet maintenance Remote Diagnostic system to proactively director Bryan Burningham uses the

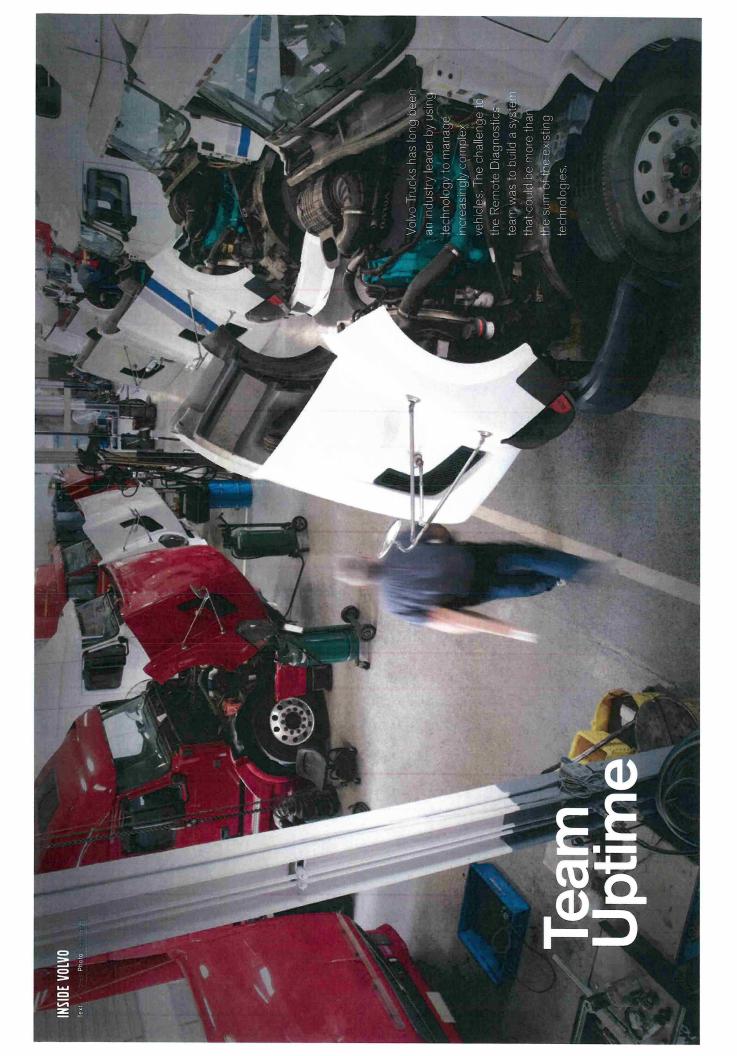
ryan Burningham, director of maintenance at Challenger Motor Freight, knows that operating a suction. With Volvo's Remote Diagnos-tic service, he knows exactly what's happening with the trucks 24/7 and can be sure that the cessful fleet is all about communicatrucks keep moving.

ing freight on time. Now, with the addition of Volvo's Remote Diagnostic service, he says it's easier to manage the fleet and get trucks back on the road because all the information is eas-ily accessible. broke down on the road, the driver had to play the waiting game and Burningham was unable to plan for the downtime. With 1,500 trucks in their fleet, Burningham knows that staying Before Remote Diagnostics, when a truck on top of breakdowns is essential to deliver-

predictive ability in our maintenance system. It helps us control our fleet and gives us a heads-up versus dealing with a breakdown. When there is don't have to wait another day to come up with so we can make better decisions ahead of time a breakdown over the weekend or late at night, a solution. That allows our drivers to keep the we have technicians available 24/7 to help. We "The Remote Diagnostic service gives us a freight on track.

trucks. It helps us prepare for the future. It helps have available, what parts we should be stocking and the strengths and weaknesses of the trucks.
Through this, we can work harder with our dealer and Volvo to get the best truck for our needs,"
says Burningham. "The tool has helped us understand some of the common failures that we have had with our us see what kind of technician skills we should





Plenty of ideas get scribbled on hotel cocktail napkins, nametags. But sometimes a concept is too compelling winner of the Group's Internal Quality Award for 2012, light. The development of Volvo Remote Diagnostics, to disregard, and a casual brainstorm gets the green and most are thrown out along with the conference was just such a project.

e've done a lot of 'back of do we use this data, in real-time, to enhance that the past with telematics repair vehicles; it's been done for years. So how nications. "The challenge was: how do we turn the envelope' things in And we've seen that we fault codes into uptime? We have a process to could deliver the data," explains Conal Deedy, Volvo Trucks product marketing manager, electronics and commuprocess? We want to have the best support for

Trucks Sales & Marketing Americas, Group Trucks Technology and Volvo Group Telematics. across the Volvo organization, including Group The wide range of expertise needed for such a project meant bringing together people from

our customers in the industry. This is part of the

strategy," Deedy says.

process and we'll support it. But at the end of the challenge," Deedy recalls. "'You come up with a "Management gave us a blank slate — and a day you need to come to us with numbers and show that it works."

So, in April 2011, Operation Sheraton (named for the hotel where the inspiration was born) was honors both inside and outside Volvo, including officially underway — and on its way to winning 2012 North American Customer Value Enhance ment Award from Frost & Sullivan and being named to HDT's 2013 Top 20 Products list.

project development. They would keep the team small — six carefully selected specialists proved ideal — and keep the focus narrow. They would collaborate in "task force mode," working out-The first step was to throw away the book on

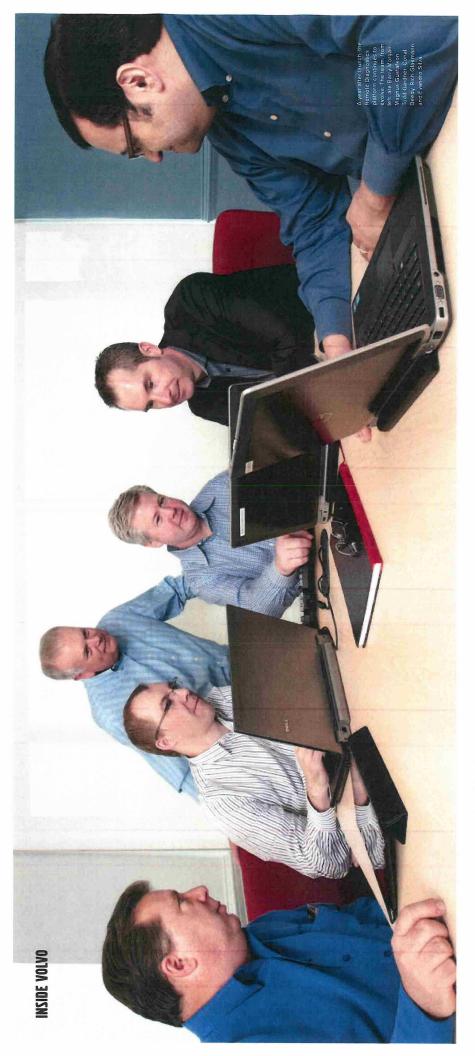
side the sort of structure that's typical for large important projects. "We wanted to collaborate and who also understood the concept," Deedy says. "We wanted people who were thinking with people who had expertise in their areas, outside the box."

tures were suggested, implemented with custom, "hand-built" solutions and evaluated. The most vided into a test group and a control group. Fea promising experiments were further tweaked and tested before going into final development, while those that proved either unproductive or too complicated to implement were abandoned start, the Remote Diagnostics team launched a With little more than notes on a napkin to pilot project using 1,300 customer trucks, di-

Evandro Silva - somewhat reluctantly, because blowing for the engineers, because we'd skip all do things. "Normally, you do concept, develop feedback," he says, shaking his head. "It's mind backwards" is not how an engineer prefers to ment, prototype, then you test. We went from concept to pilot, then we developed, based on The streamlined process, while unorthodox, proved effective, says Uptime Manager those steps of a normal project."

helpful. "Vetting the process before development cally automate. We could learn about those first tive, the order and the preliminary steps proved didn't," notes Todd Gardner, solution manager -Volvo Group Telematics. "We had manual algorithms going initially. Once we had the system neant we understood what worked and what working manually, then we would systemati-From an information technology perspecpieces before growing the product."





The speedy result speaks for itself. From concept to the official product launch at the Miami stop of the Volvo Ocean Race took just over one year.

So the Remote Diagnostics team had built it, but would the customers come on board?

"It's a trust issue," explains Magnus Custafson, director, aftermarket retail development. "You change from being reactive — getting repairs when something breaks — to

proactively deciding I'm going to replace this part before the potential failure.' It's a mindset change."

The "net-net," simply, is that acting on the Volvo Remote when a vehicle is on the side of the road. Indeed, customers in Diagnostics alerts saves time compared to scheduling repairs the pilot project reported saving a full day per repair.

hardware and the software systems that make up Volvo Remote understand the truck Uptime Manager

> body calls you and says 'your truck needs to be repaired now.' "You can't really see it. There's no physical product. Some-"This is one of those intangibles," Gustafson continues.

It's changing the industry."

new Volvo truck comes with two years of Remote Diagnostics service at no charge, using the service — the extent of contact customer acts upon the notifications — is a matter of choice. Team members also emphasized that, even though every with the Uptime Center, for instance, and whether or not a

going to get into," Silva says. "It may be a quick turnaround, rolls through the door the dealer doesn't know what they're tomed to making repairs before something clearly is wrong it may be week. Now they know how long it's going to take, but they see the benefits immediately. "There are very few surprises with Remote Diagnostics. Before, when a truck Dealers also have to be educated: They are not accuseven before the truck arrives."

To make sure customers and dealers are getting the correct information, Volvo Action Service agents have undergone specialized training of their own. "It is a little different from

what they were used to, which was very reactive. Often, all they could Morgan, customer service manager. "Now, the table's turned. Instead of waiting on the customer to call us, we're contacting the customer. We let them know we've contacted a dealer, they have the parts, and do was call a dealer or a tow and try to get the truck in," says Barry we just need to schedule the truck. It's almost a 180 degree change." The system — the powertrain, Volvo Action Service, aftermarket

repair and parts - doesn't work if all the pieces don't fit, and the Remote Diagnostics team made it happen. "It's the whole process, with the ASIST platform holding the process together," says Rich Glasmann, director, commercial telematics products, referring to Volvo's online case management tool.

between the truck hardware and support software. Silva's job is to understand the nuts and bolts behind the fault codes and make sure the Uptime Center is communicating the correct repair instructions Silva, in the newly created post of Uptime Manager, is the bridge Likewise, he takes the incoming data back to the manufacturing

team to identify and correct potential design or quality issues

"The way I see it, coming from the powertrain side, the data is now better structured to be used effectively," Silva explains. "The powdata from another system. Now we're doing much a better job. We're ertrain is made up of systems: the engine, the transmission. A guy looking at one system may not have had access to some important

connecting the right dots." "But it's weird for me to work somewhere that doesn't have a manu facturing floor," Silva adds with a laugh, referring to his relocation

Indeed, a year after the rollout, most of the team has new titles and from Hagerstown, Md., where Volvo engines and transmissions are assembled, to the Volvo corporate campus in Greensboro, N.C. responsibilities, related to Volvo Remote Diagnostics.

Glasmann was new to the company when the project started, and had never worked with the other team members. A couple of others yet they hadn't worked together either. It was crucial that they jump were Volvo veterans with a dozen years or more with the company

INSIDE VOLVO

VIEW USER RESULTS ONLINE

Remote Diagnostics in a video on Volvo Trucks' You Customers explain the real-world benefits of



"Team chemistry was a big contributor to the success," says Gustafson. "We were thrown in together and it was, 'do this."" while.' We can monitor things we don't act on, to gather more complete. "The design we implemented is so dynamic, we can during a day-long series of interviews and photography setups easily add or remove the things that we monitor," Gustafson says. "We can take control and say 'let's monitor this for a conus to get along and enjoy a camaraderie that was obvious Yet they contend the Remote Diagnostics platform is not in and begin the process of collaboration. And it was a huge

"It's the old adage: You've got data but you don't have in-ormation," Gardner says. "The data's always been there. It's a natter of translating that into something people can understand and take action against."

about, we were so focused on customer uptime," Deedy adds. explaining that Remote Diagnostics and ASIST have allowed customers to more effectively manage their transportation assets. "It's been very good for them operationally — for load "We're also seeing benefits that maybe we didn't think management - not just from the service side."

Morgan notes. "The customer can almost treat this the same way they would a PM (preventive maintenance): They can schedule service so the dealer knows it's coming in, and has "It's more like a scheduled service than a breakdown," the parts ready."

"The process makes Volvo dealers more efficient," Glasmann

right next door if service is inefficient. Your truck is going to sit if they don't have a master tech to do the diagnostics when the explains. "It doesn't matter if a truck owner has a dealership truck comes in, or if they don't have the part to fix it."

"We're committed to the way we worked in the pilot, which agnostics and beyond, the team admits to significant plans — but isn't ready to announce any specifics. Regardless, the Looking ahead to the second year of Volvo Remote Diprogram will continue to be a dynamic one.

is to continually feed the information we're getting from the isn't a big-bang project like a new engine launch. We're not processes? How can we improve customers' uptime? We're "Just as the product has evolved since last May, we've alfield and to keep adding to the service," Deedy says. "This trying to do everything at once. How can we improve our going to do it right and grow from there."

ring to the VAS agents' screens in the Uptime Center. "We've so we can understand exactly when a truck arrives for service ready introduced Google Earth: You can see the red and yellow codes and where the trucks are," Glasmann notes, referand when it leaves — and how we can influence that as well." also just launched a dwell time initiative, using geo-fencing

haven't added more data to what we had before, but we think the opportunities are all over the place. We're getting bom-barded with requests from all different directions. The whole "We learn new things every day, still," Silva agrees. "We we have a good foundation to expand. And as we expand,

it, to enhance it, to facilitate that truck coming in and getting back out on the road." company is seeing what value the system really has." So the team also has been tasked with exporting the magic

complex. So we're using technology to support that complexity as the industry moves to meet these new regulations and The team has resisted using technology "for technology's sake," he emphasizes. "There's a lot of data, a lot of information, a lot of capabilities. Vehicles are getting much more

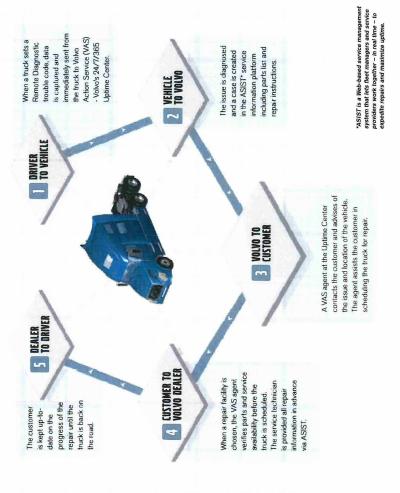
> "When they hear the results we're getting and things we're own way," Deedy says. "They have their technology, their own infrastructure, their own processes, so we're talking with them on how we worked: to focus on the process, to improve

seeing, they want to know if they can recreate that in their

to other Volvo brands and products around the world, and

they admit that the Volvo Quality Award is "a big deal" among the Group's 90,000 employees in 180 markets. requirements from customers for fuel efficiency."
"Building Remote Diagnostics and making it fit is the basic foundation for our telematics strategy," Glasmann agrees.

HOW IT WORKS: REMOTE DIAGNOSTICS



their areas, and who also thinking outside the box." wanted people who were Diagnostics concept. We understood the Remote collaborate with people who had expertise in "We wanted to

QUESTIONS & ANSWERS

Text Marianne Ovesen Photo Pontus Johansson

"Men and women face the same challenges"

The USA has more female truck drivers than most when it comes to security, the truck stops and trans-shipment terminals need good lighting, profitability, according to Ellen Voie, the founder other countries. More women generate greater and president of the organization known as Women in Trucking (WIT).

fencing, guards and adequate hygiene facilities."

"We are speaking to the authorities, politi-

What is WIT doing to support women?

WOMEN IN TRUCKING

Founder and president: Founded: 2007.

Number of members 2012: Just over 2,000 individuals Headquarters: Plover, Wisconsin, USA.

and companies. Objectives:

- To encourage women to apply for jobs in the trucking industry.
 - To make the challenges faced by women in the in-dustry visible.
 - · To act as a network and
- To present scholarships to women who want to train and develop within the forum for women in the transport industry.

Why do so few women become truck drivers?
"Because it's difficult to spend long periods
on the road. Their families suffer and it's lonely.

vehicle manufacturers and helping them attract orget, we have a shortage of drivers! If the numthe current shortage would be eliminated – and there would still only be just over ten percent ser of female drivers in the USA were to double, women in the transportation industry. Don't cians, trucking companies, job centers and women behind the wheel. are tearing down the barriers and many men are not comfortable with this. It isn't unusual for What's more, the male-oriented culture is a major challenge. Women in the trucking industry

very heavily on spotlighting women who already tips for trucking companies and transportation women to work for them. We are also focusing 'WIT is creating a recruitment guide with companies which are interested in attracting work in the trucking industry."

and, in addition, truck stops and trans-shipment

terminals are often unsafe places."

How can equality be improved in the trucking

"Men and women face the same challenges,

but we prioritize them differently for women.

women to be harassed by their male colleagues

What would you say to your daughter if she wanted to be a truck driver?

truck for two to three weeks. This would give her a chance to test her self-confidence, patience and ability to be alone for long periods. I would also tell her to learn self-defence and the easiest way I would tell her to accompany someone in a to feel safe at a truck stop."

For example, safety and security are more of an issue for female drivers. Truck stop amenities and restroom facilities can be difficult to find for

What do you think about the work Volvo Trucks is doing with female drivers?

manufacturers take an interest in the work just they won't be able to sell vehicles. Several truck manufacturers – for instance Volvo Trucks are support members of WIT." \blacksquare as Volvo Trucks does. If there are no drivers, "It's incredibly important that vehicle

who harass women. These companies also need

ers because they take fewer risks than men and to understand that women are often safer driv-

incur less large-scale damage to their trucks.

"The trucking company owners need to sup-

How is this going to be achieved?

port their female employees and must address instances of coarse language, sexism and men









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EXHIBIT 23

VOLVO TRUCKS - UNITED STATES



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Volvo Trucks > News & Events > News Releases > 2013

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6/19/2013

Volvo Trucks Awarded Top Telematics Industry Honors for Remote Diagnostics



by Brandon Borgna

Remote Diagnostics, Volvo Trucks' proactive diagnostic and repair planning service, was named Best Telematics Service or Solution for Commercial Vehicles by a panel of industry judges at the 10th annual Telematics Update Awards in Detroit.

Volvo, the only heavy-duty truck manufacturer nominated for the prestigious award, offers Remote Diagnostics as a standard feature on all Volvo-powered Volvo trucks in North America.

Volvo edged out seven leading technology companies to win the award, presented during the Telematics Update annual conference and exhibition in Detroit. Telematics Update's Detroit conference and exhibition is the largest, most prominent global commercial telematics industry event.

"It's a tremendous honor to receive the premier telematics award for commercial vehicles," said Conal Deedy, Volvo Trucks product manager, communications and electronics. "This award is a testament to Volvo's commitment to helping improve the way motor carriers address vehicle service needs. It also validates what we have been hearing from our customers - that Remote Diagnostics provides a valuable, user-friendly service that helps maximize vehicle uptime."

Volvo has delivered more than 12,000 trucks equipped with Remote Diagnostics, which monitors a set of critical fault codes and delivers detailed information about the severity of the issue in real-time to the customer. This information helps customers make more informed decisions based on the urgency of a

Remote Diagnostics is proven to enhance repair accuracy and efficiency, reducing the average diagnostic time at a service location by 71 percent and lowering the average time of repair by 25 percent. The service helps improve parts availability and provides technicians at the repairing dealer with easy-to-read repair instructions before the truck arrives for service





Click the images above to hear how $\underline{\text{Translogic Express Dedicated}}$ and $\underline{\text{Turk Enterprises}}$ are utilizing Remote Diagnostics.

Volvo Trucks was previously recognized by Global growth company Frost & Sullivan, who presented Remote Diagnostics with the 2012 North American Customer Value Enhancement Award in Commercial Vehicle Repair and Maintenance. Remote Diagnostics also received the 2012 Volvo Group Internal Quality Award for improving the quality of vehicle ownership through active use of connected vehicle data. The annual award spotlights Volvo Group's focus on quality as a core value.



Remote Diagnostics, Volvo Trucks' proactive diagnostic and repair planning service, was named Best Telematics Service or Solution for Commercial Vehicles by a panel of industry judges at the 10th annual Telematics Update Awards in Detroit. Volvo, the only heavy-duty truck manufacturer nominated for the prestigious award, offers Remote Diagnostics as a standard feature on all Volvo-powered Volvo trucks in North America.

Volvo Trucks North America's operations and products are guided by the company's three core values:

Quality, Safety and Environmental Care. The Volvo VNM, VNL, VNX, VHD and VAH trucks are assembled in the United States at the New River Valley Plant in Dublin, Virginia, while Volvo engines for North America are assembled in Hagerstown, Maryland. Both plants are certified to ISO14001 environmental and ISO9001 quality standards.

The Volvo Group is one of the world's leading manufacturers of trucks, buses, construction equipment and marine and industrial engines. The Group also provides complete solutions for financing and service. The Volvo Group, which employs about 115,000 people, has production facilities in 19 countries and sells its products in more than 190 markets. In 2012, the Volvo Group's sales amounted to \$45 billion. The Volvo Group is a publicly-held company headquartered in Gothenburg, Sweden. Volvo shares are listed on OMX Nordic Exchange Stockholm and are traded OTC in the U.S. For more information, please visit www.volvogroup.mobi if you are using your mobile phone.

June 19, 2013

www.volvotrucks.us.com



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EXHIBIT 24



Diagnostics

Volvo offers excellent software tools to assist customers and bodybuilders in performing their own diagnostic work on Volvo trucks and

Premium Tech Tool (PTT)



» Makes diagnostics fast and accurate. A Windows-based diagnostic application specially designed to test, calibrate and program engine parameters. This software supports all Volvo Trucks from model year 1998 and newer.

Truck Diagnostic System (TDS)



» The information you need in less than one minute. Truck Diagnostic System is our easy-to-use PC-based diagnostics software solution designed specifically for fleets who own US07, US10 or US13 model Volvo trucks.

Premium Tech Tool and Truck Diagnostic System Comparison:

	Premium Tech Tool	Truck Diagnostic System
Diagnostic Trouble Codes Readout	x	x
Clear Diagnostic Trouble Codes	X	x
Retrieve Vehicle Information	X	×
Learned Data Reset	X	Limited*
Manual Injector Cut-Out	X	x
Manual DPF Service Regeneration	X	x
After Treatment	X	Limited
Trip Reporting	X	X*
Parameter Programming	X	X*
Sensor and Parameters Monitoring	X	X*
Transmission Sensor Values	X	Limited*
Engine Sensor Values	X	Limited*
SIR Compliant	X	Limited*
IMPACT Access (Available Separately)	х	
Software Download	x	
Use on Warranty Repairs	Х	
Guided Diagnostics (US07 and Newer)	х	
* Places and the Disappetic Tool Com-	narisan decument for more detailed infor	mation regarding this product feature

^{*} Please see the Diagnostic Tool Comparison document for more detailed information regarding this product feature.

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Volvo Trucks > Parts & Service > Diagnostics > Truck Diagnostics System

Parts

Service

Diagnostics

Truck Diagnostics System
 Premium Tech Tool

Service Tech Training



Truck Diagnostic System

Introducing Truck Diagnostic System.

The diagnostics you need – in less than a minute.

Truck Diagnostic System is our easy-to-use PC-based diagnostics software solution for the diagnosis and maintenance of US07, US10 or US13 model Volvo trucks. Used in conjunction with an RP1210A compliant vehicle interface adapter, Truck Diagnostic System software reads vehicle controllers on the truck and displays detailed fault codes and component data in an easy-to-read, snapshot format – all in less than one minute.



Truck Diagnostic System can be used to:

- · Display vehicle temps, battery life, gauges, switches & more
- · Read and clear active and inactive fault codes
- Perform critical commanded tests and bi-directional functions, including:
 - Manual regeneration of diesel particulate filter
 - · Cut-out test for fuel injectors
 - · Resetting of learned data
 - · Resetting of trip data

- · Set select customer parameters
 - · Set speed and cruise control limits
 - Set idle shutdown and PTO park brake requirements
- Generate trip report information, including:Total running time and distance
 - · Fuel economy and average driving speed
 - Idle times
 - Hard braking
 - Other data related to vehicle and driver performance

LEARN MORE HERE

Compare PTT to TDS



» Not sure which diagnostic tool best meets your needs? This comparison chart clearly demonstrates the features of both the Premium Tech Tool (PTT) and the new Truck Diagnostic System (TDS).

Sample Life of Vehicle Report



» Click here to view a sample of the printable Life of Vehicle report's detailed information on driving dynamics, fault counts, transmission, brake dynamics, and more.

Sample Trip Report



» Click here to view a sample of the printable trip report's detailed information on driving dynamics, fault counts, transmission, brake dynamics, and more.

Updates and FAQs



» Click here for the latest news and update information.

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Volvo Trucks > Parts & Service > Diagnostics > Premium Tech Tool

Parts

Service

Diagnostics

Truck Diagnostics System

Premium Tech Tool

Service Tech Training

Premium Tech Tool

Premium Tech Tool (PTT) is a Windows-based diagnostic application specially designed to test, calibrate and program engine parameters. You can purchase PTT and other hardware & software components through the Media Center. This software supports all Volvo Trucks from model year 1998 and newer.





Please note the following:

- · PTT products can only be shipped to customers in the United States and Canada.
- · PTT products are not permitted for resell or distribution outside United States and Canada.
- Effective immediately, to improve order turnaround time, one User ID per Client ID will be assigned for all new software requests. The
 User ID will be set up using your Company Name and City.***

Technical Information and Support

Premium Tech Tool software is now compatible with Windows 7 Professional (32 or 64 bit) with or without SP1, or Windows 7 Enterprise (See Computer Specifications). The following software drivers and documentation are available for PTT.

Support Documentation:

CleanUpTool (1MB)

Volvo Adapter Matrix

PTT User Guide (2MB)

Downloads - Software Drivers:

Vocom Device Driver and Firmware Update Version 1.12.00 Download - for TT1 Only (16MB)

Vocom Device Driver and Firmware Update Version 1.0.154 Download - for TT2 Only (21MB)

Vocom Utility Application (Admin0020) (1MB)

JAVA Software Updates:

Java 6 Update 14 executable (TT1 Only)(14MB)

Java 7 Update 45 executable (TT2 Only) (26MB)

Java 7 Update 51 executable (TT2 Only)(872KB)

NOTE: The support tool may be blocked by Windows on some computers. To correct this issue: On the Zip file, right click, then properties and select unblock. Click here to view screen print.

SUPPORT — TECHNICAL SUPPORT

For Technical Support (help with using the software, problems encountered while using the software, communication issues, etc.), please call 877-978-6586, or e-mail to dlrcomm@volvo.com.

HARDWARE — ORDER COMPUTERS

Customers purchase Panasonic Toughbook laptops from Pomeroy, click here (http://www.pomeroy.com/)

Customers purchase Dell laptops from Dell, click here (http://www.dell.com/volvovcad)

PTT Tutorial Videos:

- Accessory Kit
- · Change Road Speed
- Changing Parameter P1AO5
- Change User ID Password
- Clear Diagnostic Trouble Codes

- Program VECU
- · Programming Inconsistent Parameters
- Programming The EMS
- Regen
- Set Cruise Control Speed

- Connecting Adapter Vocom for First Time
- Fuel Consumption Data US10 and US13
- LVD Full Readout
- · LVD
- LVD Update EMS
- LVD Update VECU
- Printing A Product Session Log
- Product Status
- · Program The Radio

- · Set Tech Tool User Preferences
- Stop BAF Service Using TT Support Tool
- Tech Tool Installation
- Tech Tool Update
- Unistall Tech Tool
- Update Product Information
- View and Print Diagnostic Trouble Codes
- · View and Print Parameters
- View and Print Test

Compare PTT to TDS



» Not sure which diagnostic tool best meets your needs? This comparison chart clearly demonstrates the features of both the Premium Tech Tool (PTT) and the new Truck Diagnostic System (TDS).

PTT FAQs



» Click here for the latest frequently asked questions and update information.

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Volvo Trucks > Services > Uptime

▶ Uptime

Remote Diagnostics

Uptime Center

Service Management Platform (ASIST)

Ride Assured

Protection Plans

Fleet Management

Financing

Leasing

Training



Find a dealer near you



Whether you need a new fleet, a new part, or simply to schedule service—your Volvo dealer is here to help.

Know the road ahead



Download the Uptime brochure and see how Volvo can help keep your business moving

The power to know the road ahead.

You know better than anyone that every second of saved uptime means increased revenue, maximized efficiency, and new opportunities. That's why you need a transport solutions partner that supports your business with innovative uptime services to help you keep your trucks on the road and money in your pocket.

Powerful diagnostics and streamlined repairs



Remote Diagnostics is a proactive diagnostic and repair planning system designed to quickly get your trucks back on the road, and your business back in the black.

Round-the-clock uptime support



The Volvo Uptime Center provides 24/7 support for your business.

Real-time service management



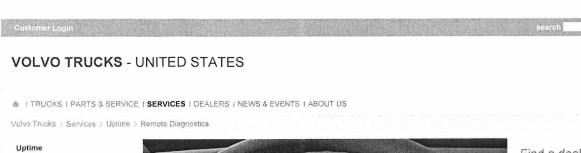
ASIST, Volvo's web-based service management platform, seamlessly connects fleet managers, drivers, dealers, and the team at the Volvo Uptime Center. 24 hours a day. 7 days a week.

Maintenance made easy



Get security and peace of mind with a Ride Assured scheduled maintenance plan performed by Volvo-trained truck specialists.





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- Remote Diagnostics
- Uptime Center
- Service Management Platform (ASIST)
- Ride Assured
- Protection Plans
- Fleet Management
- Financing
- Leasing Training



Find a dealer near you



Whether you need a new fleet, a new part, or simply to schedule service-vour Volvo dealer is here to help.

Know the road ahead



Download the Uptime brochure and see how Volvo can help keep your business moving

forward.

The VNL has evolved



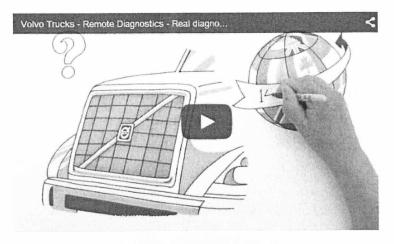
Download the new VNL series brochure to see how we've made our best-selling line of

Stay ahead of the road.

A REVOLUTIONARY NEW WAY TO MAXIMIZE UPTIME AND EXPEDITE REPAIRS. Standard in every new Volvo truck, Remote Diagnostics helps you avoid unexpected downtime by offering a range of unique benefits, including immediate communication of actionable information so you can make business decisions in real-time, proactive diagnostic and repair planning assistance with detailed analysis of critical fault codes, and streamlined service procedures with parts-on-hand confirmation before a truck arrives for service.

The result is an over 70% reduction in average diagnostic time for targeted faults and over 22% reduction in average repair times for targeted faults based on data collected from more than 50 thousand trucks on the road currently benefiting from the service.

SEE HOW REMOTE DIAGNOSTICS WORKS.



Uptime Services Fleet Managemen

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Volvo Trucks > Services > Uptime > Uptime Center

Uptime

Remote Diagnostics

Uptime Center Service Management

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Ride Assured

Protection Plans Fleet Management

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Download the new VNL series brochure to see how we've made our best-selling line of

trucks even better

Real people. Real solutions. Real fast.

THE ROAD CAN BE UNPREDICTABLE, TRUST THE UPTIME EXPERTS.

The Volvo Uptime Center offers around-the-clock assistance anywhere in Canada and the United States. With just a phone call, your driver is connected to a member of Volvo Action Service, a team of highly trained uptime experts who can quickly manage service, schedule repairs, and tackle any other issue that happens on the road.

Call 1-800-52-VOLVO (1-800-528-6586) for complete Volvo Action Service customer support in English, French, or Spanish.

Industry-leading uptime service. Welcome to the Volvo Uptime Center.

What does it take to keep your trucks moving? Our team of uptime experts know. At the state-of-the-art Volvo Uptime Center, dedicated teams and technology join forces to help you manage unplanned repairs, no matter where your trucks may be. And they won't stop working until your truck is back on the road. It's one more way we're helping you deliver on your commitments to your customers



Roadside assistance

If your truck can't make it to the repair facility, we'll bring the help directly to your tuck with 24-hour roadside assistance anywherein the US and Canada.

Load forwarding

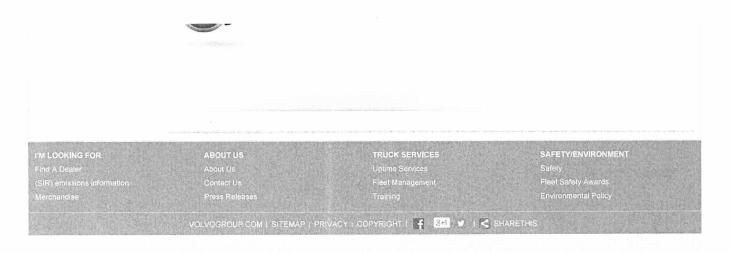
When an unplanned service event keeps your truck from making its delivery, our team will help find you one that can. We'll help you coordinate rentals or arrange for the load to be delivered by another fleet.





Parts expediting

Our team minimizes repair delays by locating the parts you need and making sure they are where you need them, when you need



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▲ | TRUCKS | PARTS & SERVICE | SERVICES | DEALERS | NEWS & EVENTS | ABOUT US

Volvo Trucks > Services > Uptime > Service Management Platform (ASIST)

Uptime

Remote Diagnostics

Uptime Center

Service Management Platform (ASIST)

Ride Assured

Protection Plans

Fleet Management

Financing

Leasing

Training



Everything you need, all in one place.

Volvo's service management platform ASIST is a simple, web-based tool that lets you monitor vehicle status, receive electronic estimates, approve repairs, issue purchase orders, and communicate directly with your dealer-regardless of your truck's location. ASIST consolidates all maintenance events and communication in one place so you can avoid invoice and repair surprises. And for trucks with Remote Diagnostics, ASIST also provides seamless communication between the service manager, the truck, your dealer, and the team at the Volvo Uptime Center.

Log in to ASIST

Manage assets with ease

Access information on all your equipment and important contacts in a single place. Make notes on fleet processes and individual assets to guide the service process.



Streamline communication



Never hear a busy signal again. The ASIST dashboard gives you access to every active service event with a click of a button, while customized service alerts keep you informed every step of the way, exactly the way you want.

Ensure accurate estimates

Know exactly what you're paying for. Online access to estimates lets you review, comment, and approve all estimates before any work is performed. And with easy-access to all maintenance documentation, you can always be sure the invoice matches your approved estimate.



Reduce costs and downtime

Efficiency drives savings. ASIST services generate proven uptime by getting your trucks diagnosed, repaired, and back on the road faster.

Find a dealer near you



Whether you need a new fleet, a new part, or simply to schedule service-vour Volvo dealer is here to help.

Know the road ahead



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Volvo Trucks > Services > Uptime > Ride Assured

Uptime

Remote Diagnostics

Uptime Center

Service Management Platform (ASIST)

Ride Assured

Protection Plans

Fleet Management

Financing

Leasing

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For best results, plan ahead.

Place the care of your fleet in the hands of highly trained Volvo professionals with a Ride Assured pre-purchased service plan. Ride Assured plans improve vehicle uptime, increase productivity, and provide peace of mind by making sure all required maintenance is done efficiently and done right. Choose from a full menu of services exclusive to authorized Volvo Trucks service locations, and get access to genuine Volvo parts, warranty adjustments, service programs, and performance updates at pre-planned maintenance intervals.

Ride Assured service plans offer unique benefits:

Volvo Genuine Parts

The right parts, right when and where you need them.



Find a dealer near you



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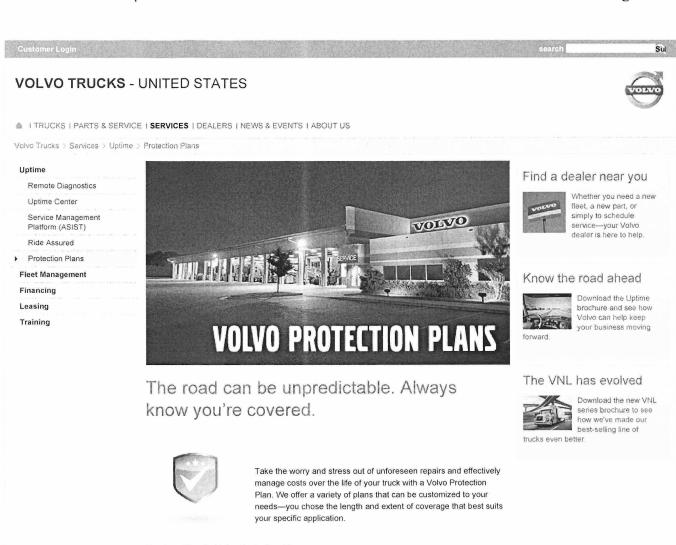
Volvo-trained truck specialists

Repairs done fast and accurately by highly-trained Volvo specialists at Volvo service centers around North America

Proactive repair management

Every service event triggers an automatic check for pending maintenance, recalls, and service programs.





Key benefits of a Volvo Protection Plan:

- Avoid future cost increases.
- Lock in current labor rates and parts prices.
- 2. Enhanced resale value.
 - Most plans are transferable, adding value to your vehicle.
- 3. A network of service.
 - Your Volvo Protection Plan is honored at over 350 dealerships across North America.

